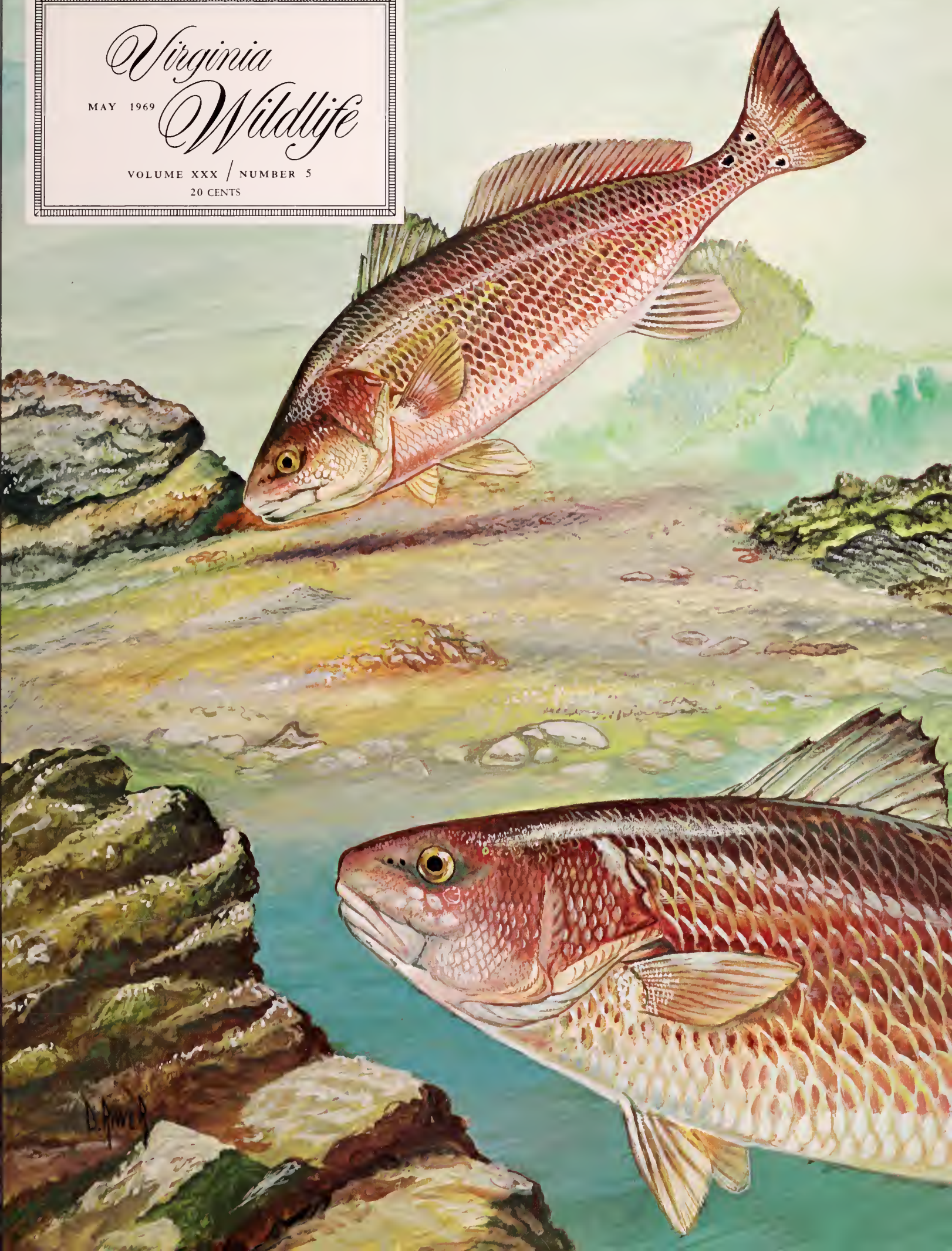


Virginia  
Wildlife

MAY 1969

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# Virginia Wildlife

*Dedicated to the Conservation of  
Virginia's Wildlife and Related Natural Resources  
and to the Betterment of  
Outdoor Recreation in Virginia*

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### IN THIS ISSUE

### PAGE

Conservation—A Powerful Word . . . . .	3
Letters . . . . .	3
Spring Silver . . . . .	4
Population Turnover and Harvest of the Cottontail Rabbit .	6
Notes from the Northern Neck . . . . .	8
Pop Goes the Weasel . . . . .	10
Rascals in the Bean Patch . . . . .	12
Conservationgram . . . . .	13
Happy With the Blues . . . . .	14
It's That Time Again . . . . .	17
Let's Cook Wild Greens . . . . .	18
Fawn . . . . .	19
Is Pygmy Pipe Rare in Virginia? . . . . .	20
Combat at Sunup . . . . .	21
Bird of the Month: Hermit Thrush . . . . .	23
The Drumming Log . . . . .	24
Youth Afield . . . . .	25
On the Waterfront . . . . .	26
Reprint Advertisement . . . . .	27
Pictorial: . . . Unlawful to Keep Wildlife in Captivity . . .	28

**COVER:** The lure of sea, sun, sand and fish is irresistible to the surf caster, and one of the largest and most prized fish of the Virginia surf is the channel bass, or red drum. Our artist: Duane Raver, Cary, North Carolina.

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## Conservation - A Powerful Word

By ROBERT R. FALES  
Graduate Fellow, Virginia Cooperative  
Wildlife Research Unit

**C**ONSERVATION is a powerful word. It is surrounded by an aura of righteousness and authority. It is loaded with sentimentality. It has been used by some to bludgeon the opposition into submission. It is bandied about by dilettantes and seriously discussed by those deeply concerned with the fate of our natural resources. It is both praised and cursed as a word, but as a word only. Unfortunately, we find much evidence that the meaning of conservation to many people is as obscure as the dark side of the moon. In other cases, a thought or a definition may be allowed to languish and stagnate in the back of the mind without further consideration. If conservation is to be real and useful, we must be more familiar with it. A powerful word it may be, but it is also a powerful idea.

President Theodore Roosevelt first spoke of "conservation through wise use." Basically, it would be more correct to say that conservation *is* wise use. Webster defines conservation as the planned management of a natural resource to prevent its exploitation, destruction, or neglect, and to keep it in a sound state. Depending upon the situation, therefore, a closed season, a buck season, or a "doe day" season may be good conservation. This refutes the often repeated slur that conservation is just preservation. Preservation is part of the tactics in the overall strategy of good conservation.

Conservation is a philosophy of thrift. Its goals are the maintenance of a healthy natural environment and the development of our nation's natural resources for the maximum long-term benefits. The conservationist is one who considers the entire environment and the effects that a disturbance may have upon it. Conservation is not "saving all the trees." Conservation is "saving this stand over here because it will hold the soil and prevent it from washing into the stream and killing the trout and piling up behind the dam many miles away."

John Clark of the Sandy Hook Marine Laboratory in Highlands, New Jersey, has forwarded another thought on the concept of conservation. He says that conservation is sharing the resources that we have now with people of our own generation and of future generations. This sharing requires only a thoughtful planning of our resource use, and a knack of living within our resource means.

However we feel about conservation, we owe it to ourselves and our neighbors to consider its implications. What does it mean to us as individuals and as a group? Only when we have thought about this concept of conservation to the fullest extent, will we be able to put it to its best use.

### Highway Toll

PERHAPS the readers of *Virginia Wildlife* magazine would be interested in these surprising statistics.

From July 1, 1968, to December 31, 1968, in driving approximately 13,000 miles on Virginia highways from North Carolina to Manassas and Harrisonburg, Bristol to Williamsburg, and points in between, I counted these game animals dead on the highways:

- 2 foxes (1 red, 1 gray)
- 5 groundhogs
- 37 squirrels
- 38 skunks
- 50 rabbits
- 34 opossums
- 4 raccoon
- 1 deer

I wonder what the total highway kill is for the entire state. In a year it must be terrific.

William Martin Johnson  
Lynchburg

*Others have reported similar tabulations. We know of no way of utilizing such individual observations to estimate the total state highway toll of wildlife, but the highway kill undoubtedly is greater than many people realize. We do believe that we have a pretty accurate check on deer kills on our highways, and last year this amounted to 1,637 animals reported, compared to about 28,000 legally harvested annually by hunters.—Ed.*

### Electric Callers, Night Hunting, and Handguns

THERE are a couple of questions that I believe would interest other of your subscribers as well as me.

First, what is the ruling on using electric callers on predators and on using lights to hunt fox and bobcat at night?

Also, I have been told that it is illegal to carry a handgun in the woods if you are hunting with a shoulder or long gun of any type. Is this true?

Robert W. Pruden  
Roanoke

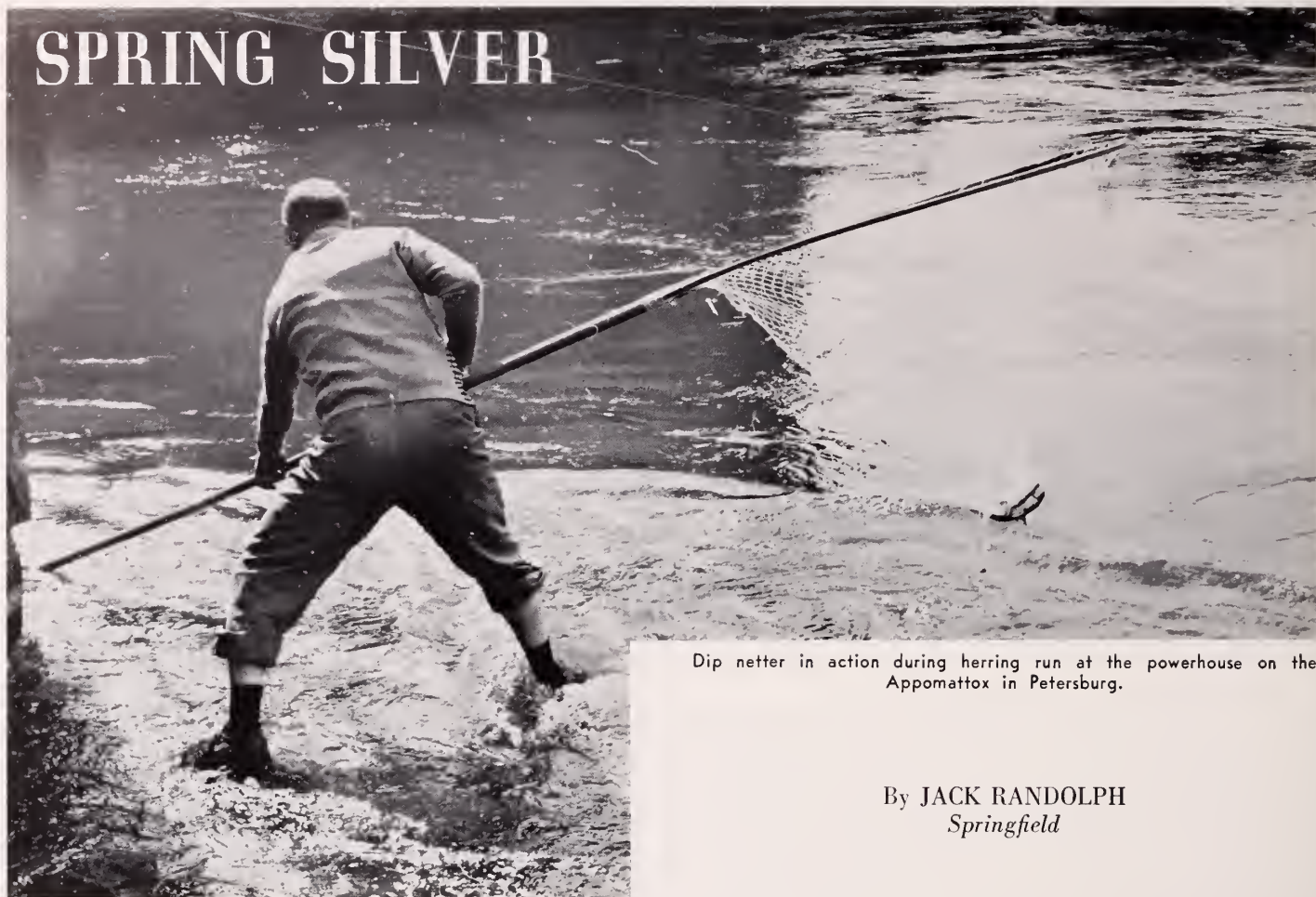
*Electric callers are prohibited for taking any wild bird or animal except crows.*

*The use of lights in hunting fox and bobcat at night is not specifically prohibited, but in hunting at night with lights one must be very careful that he does not raise the legal presumption that he is attempting to spotlight other game. The law is very strict about shining lights, under certain conditions and especially from vehicles, "upon any place used by deer or elk," and of course this can mean almost anywhere. Before using lights to hunt we would make it a point to contact the game warden assigned to the area in which we intended to hunt, to be sure the methods we intended to employ would not constitute a violation in that place.*

*It is not illegal to carry an unconcealed handgun while hunting with a long gun of any type, and the number of firearms one may carry is not restricted. The misinformation you have received on this point probably was derived by someone from the fact that it is illegal to carry a firearm while hunting with bow and arrow during the special archery season when the taking of game by firearms is not permitted.—Ed.*



# SPRING SILVER



Dip netter in action during herring run at the powerhouse on the Appomattox in Petersburg.

By JACK RANDOLPH  
*Springfield*

**E**VERY spring, starting in April, Virginia tidal waters are invaded by silvery hordes of fish, each with one purpose in mind, to follow the basic urge to seek out suitable waters to spawn. Herring come first, both bluebacks and alewives, followed closely by hickory shad and, later, by the great white or American shad.

Most of our herring are probably alewives, mixed with blueback herring. The two are difficult to distinguish from one another. For practical purposes they are the same, but the blueback, unlike the alewife, has a black intestinal lining.

Bonfires along the tidal creeks light their way. Having passed from the sea, through the coastal bays and then into the rivers, the herring surge upstream, seeking spawning grounds at the heads of the rivers and the upper reaches of the tidal creeks. It is here where the dip netters wait in ambush.

Bracing himself as he strains to hold the long handled net tight to the creek bottom and against the relentless surge of the current, the dip netter waits in the darkness for the tell-tale bump that signals fish in the net. Quickly, with a fluid motion one would think impossible with such an unwieldy instrument, the netter scoops his catch from the water. A half dozen or more silvery shapes may gleam in the firelight as the catch is dumped unceremoniously into a wash tub. The netter gives his catch only a quick inspection to make sure they are all herring and not some illegal game fish before returning his net to its position in the stream.

Dip netting, while mainly a nighttime activity, is also practiced during the day with some success. The fish seem to move best on the rising tide, when they can pass through riffles and other barriers denied to them when the tide is low.

Nearly every April evening will find dip netters guarding their favorite narrow runs in the creeks that flow to tidal rivers. Along the James, such creeks as Chippokes, Ward's, Powell's and Falling Creek on the south bank and Herring Creek on the other are well-known among those who buy dip net permits. These permits, incidentally, must be in the possession of anyone operating a dip net or anyone helping a dip netter in any inland water above salt water.

Snagging or grabbing herring with weighted treble hooks is a popular activity among those who don't own dip nets or in areas where dip netting isn't practical. The treble hooks are lethal where the herring are bunched up before some obstacle to their upstream journey. The dam at Walkers on the Chickahominy, the powerhouse on the Appomattox in

Angler plays shad that took a dart in the Rappahannock.





Petersburg and the powerhouse and upstream riffles of the Rappahannock at Fredericksburg are the scenes of an almost unbelievable melee of flying hooks and tangled lines when the herring run is in full swing. Later, as shad move up these same waters the activity reaches an almost frenzied pitch as anglers attempt to use their artificial lures for shad amid the throngs of herring snaggers.

Although it's highly unlikely that an angler will ever take his year's supply of salt herring using conventional methods, there are times when they will hit an artificial lure. Frequently shad anglers take them accidentally on shad darts. On the dam at Walkers, on the Chickahominy, small spinners fished on a foot long leader a few inches above a two ounce sinker will often catch herring. A tiny Hidebrandt 'Flicker' held in the current is particularly effective.

Herring have a way of fooling folks who are not wise to their ways. One Route 10 shopkeeper enjoys retelling the story of a New Yorker who believed that the hundreds of herring he saw swimming in the clear waters of Ward's Creek were rainbow trout. Even experienced anglers are sometimes fooled by herring, particularly when they engage in their spawning ritual of dashing wildly into the shallows where they thrash about. On the Chickahominy every spring more than one bass fisherman will spend his day carefully throwing lures at "feeding bass" when they are really spawning herring.

Behind the vanguard of herring come the hickory shad. Smaller than the white shad, the hickory, nevertheless, is the greater crowd pleaser. The hickory is a fish to be counted upon. He will willingly hit a wide variety of artificial lures and put up a battle that does credit to his less than two



Herring above, hickory shad below. Note the hickory's projecting lower jaw.

pounds left. Most important, the hickory can be counted upon to make his appearance, something the white sometimes fails to do.

Shad seldom venture up the side creeks in the fashion of herring. They stick to the deeper, faster moving streams. The Nottoway, Appomattox, James, Mattaponi, Rappahannock and the Potomac are among the Old Dominion's waters that offer fine hickory fishing in season.

Although hickory shad sometimes get in the way of grab hooks intended mainly for herring, these are an angler's fish. On the Appomattox, along the fast water stretches below the powerhouse in Petersburg, tiny silver spoons garnished with bits of bucktail or polar bear hair are deadly.

Rappahannock anglers use spoons, too, but here small shad darts are also popular. Sometimes one of each is used in tandem on one rig.

Dusk and dawn are considered prime time to take either shad, but they will take lures throughout the day. They seem to hit best on a rising tide. During the early morning or late afternoon hours the fish will hit all over the river, but at other times they seem to take a lure best in only the fastest stretches of water.

If there is a single trait common to all shad anglers, it is persistence. The fish strike in flurries and the smart shad fisherman knows that he must keep pegging cast after cast if he wants to get in on those short spurts of action. Because shad fishing calls for the light lures, experienced anglers prefer a light open-face spinning reel loaded with line testing not more than 6 pounds on a light, snappy spinning rod. His assortment of lures leans to two general types—darts and spoons.

The shad dart is a miniature bucktail jig. The sizes used for hickories are less than a quarter ounce in weight and are usually molded on size 6 or 8 hooks. For white shad slightly heavier darts on size 4 hooks are common. Like a bucktail jig, darts are made of a lead body molded around a hook with a bit of bucktail tied to the shank, just above the bend. The bucktail may be a variety of colors, but white or yellow are most popular.

The body of the dart is painted, usually a two tone combination, with red and white or red and yellow favored. Lately, darts painted with the new daylight fluorescent paints have been very effective. Orange, red, green and yellow have all been very good. One lure in particular, a small dart molded on a gold hook, painted a two tone fluorescent red and light green with yellow bucktail, was tremendously effective for me on the Rappahannock last season.

Spoons may be either silver or gold, with the former most popular. Some anglers favor spoons that also have been painted with fluorescent paints. The most important thing about spoons is size, the smaller the better. Seldom will one over two inches long be a killer on shad.

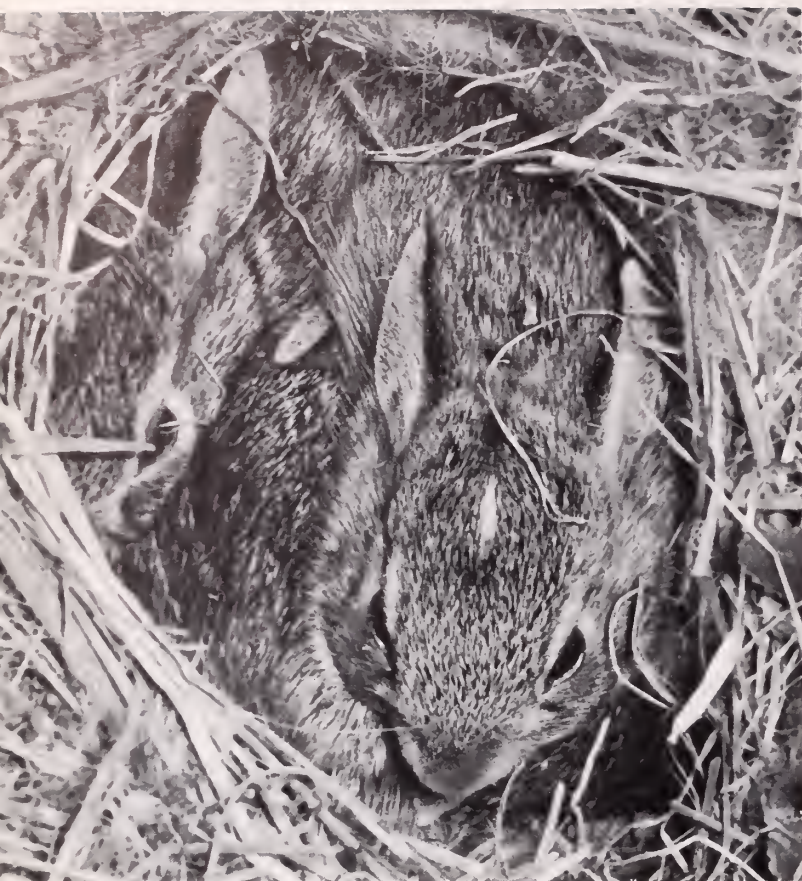
Because both spoons and darts have a tendency to cause line twist, which can be very troublesome when casting for

(Continued on page 22)

A catch of hickory shad taken on the Rappahannock.







Recent studies indicate that female rabbits produce up to seven litters a year, with up to six young in a litter.

## Population turnover and harvest of the cottontail rabbit

By KENNETH C. SADLER  
Game Biologist, Missouri Department of Conservation  
Photo by Leonard Lee Rue, III



ONE primary attribute characterizes small game populations: *hunted or not, a large part of these populations is lost each year.* This is true of quail, pheasants, squirrels, mourning doves and many other species of game and non-game birds and animals and it is especially true of cottontail rabbits.

The individual animals that made up the fall population in 1968, for example, will be largely replaced before the fall of 1969. This annual replacement—or population turnover—in cottontails usually ranges between 70 and 85 percent, but can go as high as 90 percent. The typical fall populations contain about 80 percent young-of-the-year—animals three to eight months of age—and most of the remainder are only one year older.

What does this high rate of turnover mean?

For one thing it means that for these animals to achieve this level of population replacement, two conditions must be met: they must be *highly productive* and have *high mortality rates*. After all, to have an 80 percent annual turnover, for each 100 animals in a population, 80 will have to be lost, through one means or another, and 80 young ones take their place. Since this article is about cottontails, let's look at this critter's reproductive ability and then at the obituary column.

### Rabbit's Habits

The cottontail's prowess as a breeder has been snickered at for years. Everyone knows how well rabbits "multiply." Actually we've been doing Molly and Peter Cottontail a disservice—they're better at it than we thought. Until recently we considered "average" production to be somewhere between two and five litters per year, with three or four young per litter. This meant that each adult female is capable of producing about 15 young during the breeding season. Recent studies have indicated, however, that female rabbits can produce six or seven litters per year, and although the number of young in the first litter is often three or four, later litters usually contain five or six. This means that each female can produce *30 to 35 young per year*. This tremendous production is possible because breeding in cottontails, and conception of the next litter, occurs *immediately*, usually within minutes, after the young are born. Because of this postpartum breeding, adult female rabbits are con-

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The range in summer (left) provides food and cover for many times more cottontails than in late winter (below).





tinuously pregnant throughout the breeding season with a new litter being produced every 28 days. As if this weren't enough, under the right conditions, as many as 35 percent of the *juvenile* females in a population, those mainly born in early litters, may also produce young of their own during their first summer.

With this kind of reproductive potential, why aren't we up to here in cottontails? Probably because Old Mother Nature, in her wisdom, built into cottontails some very efficient controls. Otherwise we would, indeed, be up to here in cottontails.

### Carrying Capacity and the Grim Reaper

Each piece of rabbit range, whether it is good habitat or poor, seems able to support just so many rabbits. Good range, of course, can support more rabbits than poor range, but both types have a limit to the number that can survive there. This *carrying capacity*, as it is called, usually varies widely during different seasons of the year. It is generally at its best during the summer and early fall and at its poorest during late winter and early spring. It will come as a surprise to no one that reproduction begins during the spring when the habitat begins to improve and stops when the habitat begins to deteriorate. Thus, the lowest population levels occur when the carrying capacity is lowest, and highest densities occur when the habitat is at its best.

These annual cycles of rabbit density, from few rabbits to many then back again to few, occur whether there is hunting or not, or whether there are predators or not. Protecting

rabbit densities, heavy losses can occur and weakened and dead rabbits are often seen and reported. Interestingly, our examinations of rabbits from these "die-offs" have consistently shown the cause of death to be the adrenal-ulcer pattern rather than death from disease producing organisms, such as might be caused by one of the virus or bacterial diseases.

Perhaps this whole matter of carrying capacity and mortality in rabbits can be brought into sharper focus by telling you about one of our recent studies. To test the effect of removal of rabbits from a population, we thinned some established rabbit populations in a series of field pens down to *two* pairs in some pens and *eight* pairs in others. The carrying capacity in all pens was as nearly equal as we could make it.

Stop for a moment and anticipate the outcome of this study. After production had stopped in the fall, how do you suppose these populations compared in size? Well, despite the fact that some breeding populations started with 16 animals and others with 4, the *fall populations that developed were about the same size*. The explanation for this seems to lie in the fact that the survival of the young was dependent upon the number of animals already in the population. The young rabbits born after the carrying capacity had been reached had little chance of survival. In any case, production of young per adult *was over three times as successful* in the low density pens as in the high density pens. Thus, 12 animals could, and should, have been removed from each



The fall population is made up of about 80 per cent young and 20 percent just a year older. This turnover is fairly constant, whether the rabbits are hunted or not.

rabbits from moderate hunting and from predators in a habitat with a declining carrying capacity (such as occurs when crops are removed from the field by harvesting and when annual vegetation is killed by frost) is a waste of time, and what is worse, a waste of rabbits. Why? Because as the carrying capacity declines many of these animals are going to be lost anyway, and since they cannot be saved, or stockpiled as breeders for the next year, their use for recreation (and in rabbit stew) is not only reasonable, but highly desirable.

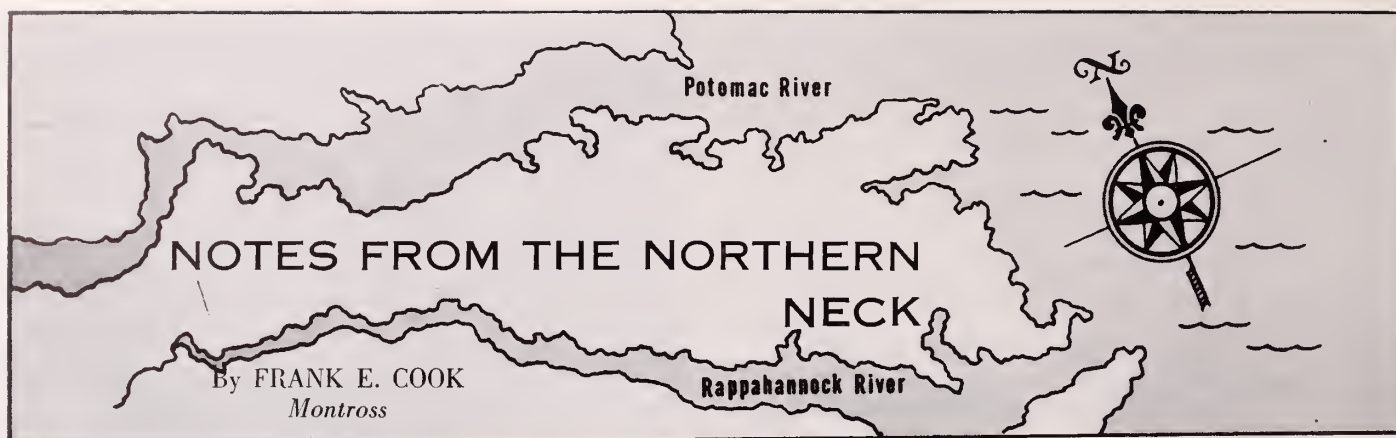
As long as the rabbit population and the carrying capacity are in balance, or the population is *below* the carrying capacity, we believe that natural losses are usually low. When the population is *above* the carrying capacity and the surplus is not removed by hunting or predators, rabbits can become their own worst enemies. Seemingly, competition simply for living space causes some members of the population to become very aggressive and others to become physically exhausted and die. Characteristically, the exhausted ones have a high adrenal hormone output and often have stomach ulcers (and doesn't that have a familiar sound!)

With rapid destruction of good habitat containing good

of the high density populations because their removal would have had no effect on the next year's rabbit supply.

Perhaps one more point should be made: we have suspected for some time (and recent evidence adds weight to the belief) that animals in populations that are allowed to develop above the carrying capacity may produce young that are less productive than their parents. In other words, stressed parents may transmit their problems to their young, who in turn are less productive. This could explain why, although rabbits have very high reproductive potentials, years of high populations don't follow immediately after lows. There is usually a period of several years before the population begins to recover.

In summary: survival (if not *both* production *and* survival) in cottontails is favorably influenced by the removal of surplus animals from the population. Also, rabbit populations go through fairly rhythmic increases and declines in density, usually extending over several years. Their failure to achieve peak numbers following population declines *may* be caused by a stress that persists through several generations. The key to rabbit abundance is habitat quality and carrying capacity, not hunting or predator losses.



**T**HE Northern Neck is a geographical part of Virginia but in travels throughout the state I have had little success in explaining where I live by saying "Oh, I live in the Northern Neck." The readers of *Virginia Wildlife* no doubt are better informed, but as a preface to some notes I'll just say that the name has been applied since early Colonial Days to that narrow strip of land that lies east of Fredericksburg between the Potomac and Rappahannock Rivers. This land is gently rolling and mainly agricultural.

The rivers are broad and the estuaries peaceful with a strong flavor of oysters, blue crabs and fish.

There has been at least one pair of pileated woodpeckers around my home for some time. They can be observed during all four seasons. It is amazing how rapidly they can tear up an old tree stump, and the aggressiveness with which they dig out wood splinters the size of large kitchen matches is something to watch. The air is literally filled with these splinters in rapid succession. To be attractive, the stump must have a supply of insects, grubs or eggs, which implies partial deterioration. An examination of these splinters, however, shows them frequently to be of firm wood which probably encased a juicy grub.

The pileated woodpecker is not dependent on animal life for a living. In late January, I watched one in our large holly tree busily eating berries much to the dislike of a pair of blue jays and a lone mockingbird. The jays were the first to attempt to dislodge this obviously rank intruder. Name calling was completely ineffective, even when directed from as close as one foot. This woodpecker seemed to have prior knowledge of what the jays would do and continued to eat. The jays eventually approached with bill range. Then one swift stab of this long and powerful beak was sufficient to send the jays scurrying. This left the holly tree to the woodpecker and the mockingbird. Initially the mockingbird had been as outraged as the jays but had been forced to stand by and watch. Once the jays deserted, the mockingbird felt completely the master of the situation, and apparently never had any doubt of the outcome. It proceeded to divebomb this pileated giant in such a manner that eating was impossible. These strikes were so swift and well timed that, in frustration, the woodpecker soon left the holly and all of its berries to the mockingbird.

This particular mockingbird had likely already picked this particular holly as its future nesting place, and will occupy it all the next summer, if the jays permit. Last year the contest between the jays and the mockingbird was so bitter that neither occupied the tree. In all previous years, to my knowledge, only mockingbirds had claimed this tree. It is possible that the present situation is caused by a disproportionate increase locally in the number of jays, a condition



Photos by Leonard Lee Rue, III

The Northern Neck has long been the home of the osprey, or fish hawk.

which superficial counting verifies.

The great blue heron winters in this area, but in summer it generally nests farther north. The American egret (a slightly smaller white heron) is here all summer, but goes south for the winter. There is an overlapping period, however, when both are around. The two species have similar feeding habits and compete for choice locations. One day I noticed an egret standing in favored shallow water just off a nearby point. A blue heron swooped in and chased the egret away. The egret was hungry or determined, or both, and refused to move more than 50 feet, which didn't suit the blue heron. By walking toward the egret the blue heron made the egret move farther away. Finally the egret flew to the other side of the point where the procedure was repeated. Soon a second egret arrived and took a position so that the blue heron was between the two egrets. Now, when the blue heron moved toward one of the egrets the other egret closed the gap and made aggressive movements. Thus, by bringing pressure to bear from alternate sides the two egrets were able to force the blue heron away and obtained undisputed possession of this desirable feeding water.

Once, I watched a flock of seagulls playing what appeared to be a game on an ice floe. One of the gulls had caught a fish which lay on the ice. Apparently any gull that wished was free to take a bite or two without any objection by the group. Then,



suddenly, one of the gulls would grab the fish and attempt to steal it by flying away. Three or four of the other gulls would immediately give chase and, in a display of aerial acrobatics, make the culprit drop the fish. Thereupon one of the gulls would snatch the fish out of the water and carry it back to the ice floe, where the whole game was played over and over.

It is easy to form the opinion that gulls are surface scavengers, which they are. A more accurate description of their feeding habits, however, would be that they choose the food easiest for them to get, preferably animal (other than left over sandwiches). They are avid followers of the plow when the ground is full of worms and grubs, and their insect proclivities have caused a monument to be erected to them in Utah in honor of their assistance to farmers during a scourge of grasshoppers. A point not generally recognized is that gulls will actually dive under the water and chase and catch their prey just as cormorants do. In my observation, this activity is generally limited to narrow and relatively shallow coves where opportunity to escape by the hunted is limited.

The shore lines of the lower Potomac and Rappahannock Rivers and their estaries have long been the home of the esteemed fish hawk, the osprey. Now, slowly but surely these areas are being denied the osprey for nesting purposes through the development of waterfront properties. I know of one creek (estuary) nearby where formerly one could enter by boat and observe the osprey and its nests without even half trying. One day, I observed six osprey in the air at one time in an opening less than the size of a city block. This property is now being sold as waterfront lots, the timber has been cut out, the small pines thinned, some of the land bulldozed to the water's edge, and houses are being built. No self respecting osprey would be caught dead in the place, notwithstanding its attractiveness to people, mainly city dwellers. Where will the osprey go? Where will it nest? There are marshes and swamps, but these already have their quota of osprey and other birds. In time, these areas too will be drained, dredged and filled in order to build houses unless some widespread or overall authority comes to the rescue.

I have a suggestion that may have some limited value in the search for osprey nesting sites. I have noticed that a certain U. S. Coast Guard lighted buoy located slightly off-shore is sufficiently attractive to osprey for a pair of these birds to build a nest on it year after year. Usually the nest



The American egret is a summer visitor.

soon obscures the light, and by virtue of the duties assigned the Coast Guard the nest is removed, several times a year in fact. Boats pass close to this buoy, but this does not deter the birds. One year the nest was built so that it did not obscure the light completely and it was allowed to remain—whether from instructions from superiors, or from soft hearted crew members, or for other reasons I don't know—nevertheless it remained. One day I passed this buoy in my boat and was somewhat surprised to note that there were three ospreys standing around the light. As I came to the foot of the buoy two of the ospreys flew away and circled, making aggressive sounds. The third osprey that stayed had the appearance of a young bird. The fact that it remained on the nest gives credence to this assumption. I returned later with a camera, but all the birds were gone.

The top of this specific buoy was table like, from which the light projected upward. In my opinion, if piling could be sunk in the water in suitable locations and a three-foot square platform built on top of each about ten feet above the water, ospreys would be happy to use these locations as nesting sites.

Great blue herons feed in the shallows.



Gulls play games with dead fish.





# POP GOES THE WEASEL

By ALBERT G. SHIMMEL  
*West Decatur, Pennsylvania*

AS children we learned the folk-song-game, "Pop Goes The Weasel!" Its inspiration was the speed with which the animal moved and dodged. The song may have been responsible for a curiosity that led some to seek a more complete knowledge of this interesting little creature.

I kicked the snow covered shock of corn that stood at the edge of the field. I kicked it a second time and was about to turn away when the snow at its base exploded and a cottontail bolted away toward the woods. My brother and I got off equally ineffectual shots. After the age-old custom of country boys, we stood debating as to which of us should play the hound while the other as hunter tried to intercept the animal.

Suddenly we heard the rabbit squeal; then after a short interval it squealed again. We sprinted in the direction of the sound. There were one or two trifling traces of blood where a stray shot had cut the rodent's skin. Just inside the wood another trail joined that of the fleeing animal. It dotted the rabbit's tracks with paired punctuation marks.

At the edge of a clump of green briars we found the cottontail lying dead at the end of a bloody furrow. A weasel, white except for its beady eyes and ebony tipped tail, was tugging the carcass toward the safety of the thorny tangle. The fact that the victim was several times its own weight did not deter the energetic hunter.

As we drew near the weasel stopped just long enough to show its teeth and snarl in defiance. With redoubled effort it moved the rabbit, inch by inch, toward its goal. We ended its career with a sharp blow from a stick, collected the rabbit and the weasel's pelt without a qualm of conscience. At that age boys yield to the predatory instincts inherited from their ancestors.

We speculated as to the reason for the contrast between the spotless white fur and the black tip on the tail. It was years before we learned the scientific theory that explained that dark tip as an attraction target for winged predators and an aid to the animal's struggle for survival.

It is well that through the wisdom of Providence, the weasel was packaged in a diminutive body as compared to most carnivores. The fierceness, courage and agility inherent to this family might easily have threatened the existence of larger dominant species and changed the course of world development.

The hypertension of its personality triggers such intense activity that its energy consumption requires a minimum of one third its body weight in food each day. By comparison the average man would require about sixty pounds of steak over the same period. At today's prices who could afford to eat?



When faced with a concentration of game, the weasel's blood lust dominates its actions. The hypnotic frenzy of destruction continues until the slaughter is complete or the survivors have fled. It is thought that this is one of the checks placed on certain species that are subject to periodic population explosions.

Unfortunately, the weasel does not always distinguish between its natural prey and the poultry, kept by man for his own benefit. When this conflict of interest occurs, the



beneficial effects of the weasel's hunting are forgotten and the weasel is destroyed.

A number of observations show that many times the little predator will live in or about barns and poultry houses, efficiently reducing the rat and mouse populations and completely ignoring the poultry so conveniently near. There are other individuals that kill enough valuable fowls to constitute a loss of considerable economic importance. These animals acquire a taste for easy living and must be destroyed.

As a farm boy I had ample opportunity to observe this furred mouse trap. In late summer, when the grain had been shocked, the mice gathered and burrowed under the drying sheaves to live in luxury from convenient food supplies. Meadow mice, white-footed mice and chipmunks were most common, but there was an occasional barn rat and, more rarely, a jumping mouse or two. The animals were particularly abundant when the fields were adjacent to the woodlands.

When, after the drying process had been completed, we lifted the sheaves to the wagon, the freeloading rodents scurried in all directions. The farm Airedale had a holiday. Occasionally an overturned shock revealed a number of dead mice. Critical examination revealed puncture wounds at the base of the skull and often as not a torn throat. Sometimes one or more animals would be partially devoured. For some time the killer remained anonymous. Chance disclosed its identity.

One day the Airdale reached enthusiastically under a partially raised shock. He gave a yelp of pain and lurched backward with a weasel locked securely to his nose. He shook his head repeatedly, then, failing to dislodge the fury, he pulled it loose by placing his hairy paws upon it and pulling. He was so furious that the snap of his jaws almost cut the weasel in half . . . .

Even when freed from his antagonist the dog showed acute distress. It whined, plunged its nose into the grain, rubbed along the ground, then finally rolled. I came closer to investigate and for the first time experienced the nauseating odor of weasel musk. The mystery of the dead mice was solved. Under the shock was a cache of seven dead mice, each dead of the characteristic puncture wounds.

One side of a low meadow, adjacent to a woodland, was bordered by a stone fence. A spring run crossed a corner of the meadow, fed a marsh pond, then wandered through the woodland to the creek beyond. As a boy, this bit of farm landscape was my winter trapping ground. Each winter the pond yielded several muskrats. A mink or two strayed up from the creek and sometimes I was fortunate enough to capture one. It was the stone fence on which I depended to swell my meager assets.

The fence formed a haven for weasels that came to hunt for the small rodents that foraged in the meadow. The openings between the stones served as ready-made runways, snug nesting compartments and storage rooms for surplus game.

My trapping had little effect on the density of the weasel population. The harvested animals were replaced by others from the surrounding areas. The supply seemed to be in-

exhaustible. Although their pelts did not command a high price, the regularity with which they were caught made trapping them a profitable venture.

My method of trapping them was simplicity itself. A box with eight inch-square ends and a length of about eighteen inches was built of weathered boards. Two-inch entrance holes were cut in either end. The top was a board cut long enough to shelter the entrance and held in place by a heavy stone. An inch or two of chaff with a handful of waste grain provided cover for a concealed trap and attracted the mice. Weasels, their curiosity aroused by the cubicle that smelled so invitingly of mice, were caught. The trap was a wide jawed  $1\frac{1}{2}$  that killed the animal instantly with a body grip. The white pelt was not spoiled and always commanded a premium price.

The curiosity of a weasel is rather well known to naturalists. Often when one is hidden, it will appear to investigate an imitation of the squeaking of a mouse or the lisp of a bird. On two occasions they have responded to a vermin call while the author was calling foxes. When investigating such a sound, they become highly excited and dash about seeking the source of the sound.

The New York Weasel is the common *Mustela* over much of eastern United States. The male is nearly 16 inches in overall length, while the female averages 13 inches. The tail accounts for more than one third of their length. Where the winters are long and cold, they turn white except for the black tail tip. The summer fur is brown with white or yellowish white belly. In the milder parts of its range it retains its brown during the winter.

Occasionally the Allghenian Least Weasel is found as far south as Virginia. These have at total length of less than half that of its larger cousin. The author has had two contacts with these animals.

In a cranberry bog that bordered a high mountain lake I was aware of small scurryings among the sphagnum tussocks. Finally, a fat meadow mouse burst from a runway, closely pursued by an adult and three young least weasels. Before it gained the safety of another burrow the female killed it and, followed by the young, dragged it under a log and out of my sight.

One autumn afternoon as I walked beside a foundation wall there was a rustling under some fallen leaves. Reverting to youth I grabbed quickly and threw the animal against the wall. Imagine my surprise when instead of the expected mouse the victim was the rare least weasel. It was barely 7 inches from the tip of its nose to its abbreviated half-inch tail. The back was a beautiful rich brown that contrasted sharply with the snowy underparts. The preserved skin is now one of the prizes in a local collection.

The value of the weasel to man far outweighs the damage he does. When we consider the value of his pelt, the scales are tipped for its protection.

When the deer mice and chipmunks that lived in and around the cabin reached such a peak of population that we contemplated defensive measures, their numbers showed a sharp decline. When I approached the wood pile one evening, the sight of a weasel, darting in and out of the crevices between the logs, explained the mystery. Unconsciously I began to hum the song of childhood, 'Pop Goes the Weasel!'



# RASCALS IN THE BEAN PATCH

By ILEEN BROWN  
South Boston

THERE was evidence that something was around. A well-traveled path led from the blackberry vines to the soybeans. And the beans seemed to be suffering from some rare malady that had stunted their growth. On closer inspection of the beans we quickly discovered the disease. Woodchuck, or groundhog, as we call them, fever.

There was mixed emotions among the family over these intruders. They would have to go, some said. Me, well they were for watching and enjoying.

Armed with binoculars and my cocker spaniel I got in the

Photos by L. L. Rue, III



car after an early breakfast and drove to the bean field.

Fortunately the road weaved around the field, so I could sit in the car and have a grandstand seat.

This particular field for many years has been a gathering spot for wildlife. I've watched squirrels swipe ears of corn when the field was planted to corn, quail bring their young to feast, doves and other birds are always plentiful, and on rare occasions I've watched deer feeding.

I stopped the car where I would have a clear view of the berry patch and its foot-wide path leading from it. Within five minutes the first groundhog appeared at the path's entrance. He stood up on his hind legs and looked around. He looked so much like a miniature bear, I thought. He sniffed the air, turning his head from side to side all the while. After a few minutes he got down on all fours and wobbled back into his den.

A brisk breeze was stirring so I thought possibly the scent of the dog I had with me had traveled down to him. I rolled up the car glass and waited. A few minutes later a groundhog appeared about six feet from the path I had been watching. It was only now that I noticed there were more than one path leading into the berry patch. This groundhog, too, stood up on two feet and looked around. When he was satisfied all was well he went down the drain ditch that borders the field and then into the soybeans.

Through binoculars I watched as he nipped off the tender top leaves of the beans. One mouthful from each vine was all he took. With green leaves still showing from the corners of his mouth he would stand tall and look the field over. Satisfied no enemies were near he would swallow the leaves and then go on to another vine, and another delectable mouthful.

After he had his fill he wandered on back to his den where another member of his family was already standing at the entrance waiting his turn at the breakfast table.

During the two hours I watched, four groundhogs took turns eating the bean leaves. After all had been fed two groundhogs, from a standing position, engaged in a little playful boxing. When they tired they too scurried back into their den.

The groundhog is credited by many to be a weather prophet. If on February 2nd he sees his shadow there will be six more weeks of winter weather. (In this part of the country there probably will be anyway!)

In late fall, well fed and supplied with a thick layer of fat, he goes into his den, closes the entrance and curls up for a long nap. His breathing becomes so faint that it is almost non-existent. His pulse is slow and faint, body temperature drops comparable to the temperature in his den. In this condition he will sleep until spring, living on the fat stored beneath his skin. When the weather warms he awakens, digs out of his den and goes looking for food and a mate.

From two to eight young are born in April or May. These are weaned in about five weeks and are ready to start on a diet of grass, vegetables, leaves, berries, nuts or bark.

A groundhog's burrow or den is made up of several entrances, with a grass nest in a side tunnel. Other animals, such as rabbits, opossums, skunks, and even foxes, will use the den.

Groundhogs have tremendous appetites, and when they start in a garden they soon strip it. Therefore it is understandable why they aren't exactly welcome by most. As for our groundhogs in the bean field, come late fall they should be about the fattest groundhogs that ever curled up for a winter nap.



## VIRGINIA WILDLIFE

# CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

HUNT SEASON CHANGES MINOR. A fall hunting slate very similar to last year's has been adopted by the Commission of Game and Inland Fisheries. Turkey seasons underwent some of the greatest changes. The eastern fall gobbler season was moved forward about a month to open with the deer season on November 17. Seasons both east and west will end December 20.

A 1970 spring gobbler season the same length as in 1969 was set with the dates changed to April 18--May 9 in 1970 to continue the traditional Saturday opening.

The only major change in deer bag limits was in Albemarle, Fluvanna and Louisa Counties, which were included with those to the north where doe shooting will be permitted on the last day of the season only. Surry County was included with those in the Northern Neck where one doe will be permitted during the last 12 hunting days.

Small game seasons were left unchanged, but bear hunters were granted an extra 10 days, making their season extend through December 31.

Changes in general hunting regulations included legalizing air boats for hunting in Back Bay and prohibiting the use of live decoys for taking all game birds and animals instead of just waterfowl. The use of air boats for fishing on Back Bay was also legalized between the dates of April 1 and September 15, inclusive.

WYTHE COUNTY LAKE FACILITY TO BE COMPLETE JULY 1. The Rural Retreat Lake Recreational facility being constructed by the Commission of Game and Inland Fisheries in Wythe County is scheduled for completion July 1. The 90 acre lake is now filling and has been stocked with bluegills. Bass are to be added this spring. Work is now concentrated on the campground and concession area and access roads. If the fish grow well, the lake may be opened to angling in the spring of 1971.

LAUREL BED TROUT LAKE OPENED APRIL 5. Laurel Bed Lake, recently completed by the Commission of Game and Inland Fisheries on its Clinch Mountain Wildlife Management Area near Saltville, was opened for trout fishing with the regular trout season at noon, April 5. The 300 acre impoundment will be operated as a part of the Big Tumbling Creek fee-fishing facility and the one dollar daily fishing permit is required of all anglers.

Small brook trout and a few excess brood fish have been stocked in the lake, but it is not expected to provide angling as good as found in the stream which is stocked at frequent intervals. The lake's main purpose is to provide water to maintain stream flow in Big Tumbling Creek. Any fishing it provides will be a bonus for the 1969 season.

Fishing regulations will be the same as on the stream. Bait but no minnows will be permitted and anglers will be limited to 5 fish per day. Boats are not available for rent at the present time, but anglers may launch their own. Gasoline motors are prohibited. A number of narrow fingers project into the lake for 150 feet or so and will facilitate bank fishing.

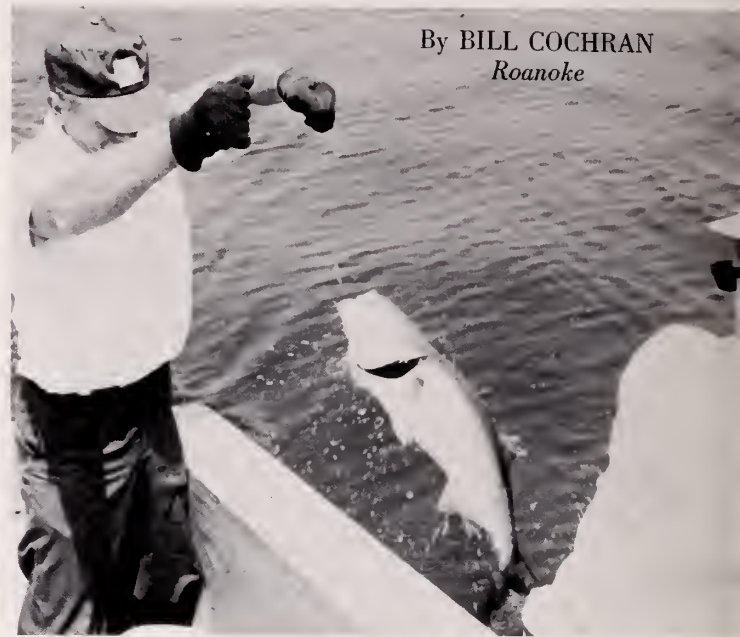


# Happy With The Blues

By BILL COCHRAN  
Roanoke



Jack and Eddie intently watch their gear, ready for the savage strike of a blue.



Captain Tommy Hewett brings aboard a pulsating blue for Bob Quick.

**J**ACK Smith's short, stout trolling rod suddenly bowed like a flimsy weeping willow limb. The drag on his reel was screaming, almost smoking. It was a humorous understatement when he yelled, "I've got one!"

We were trolling for bluefish in the rolling waters 25 miles out from the sandy coast at Cape Henry. We had our work cut out for us. A few days earlier, Dick Stephenson Jr., of Richmond, had landed a lunker 18 pound, 11 ounce blue which was leading in the annual bluefish tournament. Dick had caught his fish off Virginia Beach trolling with Capt. John Pierce. It measured a whopping 37½ inches in length and 20½ inches around its girth, edging out the old state record by one ounce.

Now Jack was onto a big blue, and we were almost holding our breath. The steel-blue, torpedo-shaped scrapper, packed full of husky muscles, was charging about with the speed and power of lightning. Then tragedy struck. Jack, somehow, fumbled the reel, accidentally hitting the free-spool lever, giving the fish slack line. It was gone in a flash.

Everyone in our party—Homer Reed, Eddie Herndon, Bob Quick and I—felt for Jack. Only a fisherman fully knows the experience when keen excitement crashes headlong to bitter disappointment, leaving you as empty as a deflated balloon. But while this was a time for hurt, it was also a time for hope. We had been trolling for an hour and it was our first strike. Things were looking up.

Indeed they were! Eddie was suddenly shouting, "STRIKE! STRIKE!" A jumbo blue had clamped down on his baitfish like a steel trap and was zipping through the water with wrath in his eye.

Fighting a giant blue, pound for pound one of the greatest sport fish that wears scales, can take a man's breath, can make him grit his teeth, can cause his arm to feel as if he's pitched a 15-inning ball game. From 100 yards out, this one fought every inch of the way. When he saw the boat, the fishermen peering at him, the net held ready, he scrapped all the harder.

Our captain, a hustling redheaded skipper named Tommy Hewett, who was skillfully handling the 42-foot Jacbil out of D & M Sports Center at Lynnhaven Inlet, was ready to bring the fish aboard. Then, in an awful instant, it had slipped the hook and was free.

"He would have gone 15 pounds or more," Capt. Tom said, with emptiness in his voice. We all shook our heads sadly. I was beginning to wonder if it was possible for us to land one of these voracious fighters.

For the past several years, almost like clockwork, jumbo blues have been arriving off the Virginia coast sometimes between mid-May and the first of June. They appear to hang off Virginia Beach reefs six to eight weeks, then move on to other waters. Some fishermen feel that they come to spawn over the grass beds, and the fact that many of them are laden with roe lends weight to this theory. Whatever the reason, they come in large numbers and large sizes, and they mark the start of the offshore fishing season in Virginia.

Trolling for jumbo blues some 30 miles off Virginia's Cape Henry.







The strain of fighting a husky bluefish is written on Eddie's face.

Peak fishing normally occurs from the middle of June through the first week of July. So reliable is the run that a major saltwater tournament has been formed around it. Called the Norfolk-Virginia Beach Blue Fish Tournament, it sometimes attracts as many as 400 boats in a single day.

The whole thing is nothing short of amazing considering that about a dozen years ago no one was fishing offshore for blues where the annual blitz now takes place, or if they were, they weren't telling.

Since the blues have been discovered, interest in them has been fanned to fever pitch.

At times, charter boats have gone out and landed catches of 75 to 100 jumbo blues. A dozen fish per boat, however, is considered a fine catch. Then, of course, there are days you sing the blues instead of catching them.

Our gang wasn't about to sink the Jacobil with a heavy catch, but we were having great fun. We were fishing in

the area of the Black and White Buoy where huge numbers of blues are taken each spring. The neighborhood of the buoy, 21 miles off Cape Henry, normally provides the best angling. However, it may vary somewhat from year to year. In 1968, some of the top blue catches were made southeast of the buoy, up to 40 miles off the cape.

Lately, in the fall, a run of blues has been showing up closer in, around the Radar Buoy some 15 miles off Virginia Beach. This run is of shorter duration than in the spring, but the blues tend to be sleeker and heavier. Dick's record set in the spring was smashed in the fall by Joe Barlow of Richmond who landed an 18 pound, 14 ounce blue at the south end of the Virginia Beach reefs.

The primary method of catching blues is slow trolling with boats moving back and forth across productive areas like ants covering a picnic table. Tackle most often employed is relatively heavy, 30 to 60 pound test braided or monofilament line on 3/0 to 6/0 reels and matching rods. To withstand the savage tom cat teeth of the blues, three foot heavy wire or cable leaders with big, strong swivels and snaps make up the terminal gear.

Most charter boat skippers, like Capt. Tom, normally start out by trolling baitfish. But the blues will hit, and sometimes prefer, lures such as Japanese trolling feathers with nylon tails, mop lures, plastic squids, hammered stainless jigs and various trolling spoons. Joe took the record while trolling with a spoon.

A few sportsmen prefer to locate a school of blues, then cast to them instead of trolling. At times, 11½ ounce poppers will provide great fun on light tackle. The trend is continually toward sportier tackle.

Normally, the big blues are taken on or near the surface, but there are times you must go deep, 100 feet and more, trolling with sinkers or planers to dig a catch out.

The toughest problem about catching blues is locating them. This becomes a job for the skillful angler or the charter boat captain when they aren't visible feeding on the surface. Blues normally run in schools. If you catch an 8, 10 or 12 pounder, you may expect to catch fish of equal size until the school sounds or is lost. At the peak of the run, the large number of participating boats makes it difficult for the fish to avoid discovery.

Usually, the blues are well off Virginia Beach, 40 miles or so, at the start of the spring run. The big choppers then move in closer as the run progresses. Their number and size

Captain Hewett tries a combination of bait and artificial lure to bring action during a lull.





appear to vary from year to year. In 1956, when the fish were first discovered, 8 to 12 pound whoppers were taken. In successive seasons, they became larger, but less in number. Then in 1962, five pound youngsters in large numbers began showing up. Since then, the blues have grown larger each year. In 1968, they were huge, averaging an impressive 12 to 14 pounds, the biggest ever. But they were also fewer in number than previous years.

Numerous charter boats are available in the Long Creek-Lynnhaven Inlet-Little Creek area and from areas a little farther removed from the fishing grounds. Cost to a party of up to six is about \$100 a day. Advance reservations are a must.

Anglers, if they wish, may enter the bluefish tournament for a modest \$2. Fishermen landing the largest blues in the tournament, which runs mid-June through the first week of July, are awarded exquisite trophies. The state presents all anglers who land a blue 12 pounds or more an attractive citation as part of the Virginia Salt Water Fishing Tournament.

Katie Davis weighs in our catch at D & M Marina, one of the official weighing stations for the tournament.



Eddie weighs a thirteen pounder he landed.

At one time, state citations were given for blues six pounds and up. In 1963, so many citation fish—more than 1,700—were registered that the saltwater tournament was almost bankrupted. In 1964, the minimum citation weight was boosted to 10 pounds. That year, 780 bluefish citations were awarded. Later the minimum weight was jumped to 12 pounds. Even with this challenging requirement, several hundred citations go out each year.

Our group accounted for some of them during this trip. After a lull in the fishing, suddenly Bob's reel was singing and his rod was bowed sharply. He was hooked to a rip-snorting blue, a fish that looks like it has ben turned out on a lathe and fights like it has been tempered with strapping, brute power. After fighting tooth and scale, Bob had a husky 10-pounder flapping in the fish box. It was a sweet sound.

A few minutes later, Homer landed a 12½ pound citation catch. Then I got a 11-pounder. Next, Eddie boated a husky 13 pound citation. We were onto them!

However, alas, none came near setting a record. But there is always another year, another contest, another chance, I told the fellows. It was no problem getting them to agree.



# It's That Time Again

By PAUL STURMAN  
*Chevy Chase*

WITH dogwoods in bloom and violets lending color to brown earth, morels are in season. It is time again for long walks in the woods and fields to hunt for nature's delectable offering in early spring, morels or sponge mushrooms.

These fungi, wherever they appear, are a favorite prey of mycophiles. The trout fisherman, braving April's raw winds and showers, is just as anxious to add a few morels for flavor to the trout and bacon sizzling over the campfire as is the East Indian hunting in the Himalayas for the only mushrooms Moslems may eat. In marketplaces of Central Europe morels appear with regularity in season. After World War I and II Poles in the Baltic region used morels

characteristic of morels, and took advantage of the situation even if it meant the destruction of valuable timberland (the landlord's, not theirs).

In our country morels are one of the few "wild" mushrooms exploited commercially to some small extent. The fungus keeps well, refrigerates easily, dries readily, and when soaked in water will regain its original form. There are gourmet restaurants in some of the large cities where the morel, prepared by experts, commands a respectable price and a place of honor on the menu.

Some years ago experiments were conducted at the Beltsville, Maryland, station to grow morels under simulated conditions, but the mushrooms refused to develop further than the initial button stage.

Virginia is especially favored with forests, and consequently mushrooms, with the morels leading the field. Around dogwood-blossoming time I find it difficult to take advantage of all reports indicating the occurrence of morels in abundance at a given locality.



Morels, edible and delicious.

as a medium of exchange, offering them for barter strung on string like wampum in our Colonial days.

Perhaps, in addition to the palate-pleasing flavor, the ease with which morels are identified lends an incentive to expert and dilettante alike to seek them out as a reward for a jaunt in the woods.

The hunt for sponge mushrooms has been a custom of long standing, and the hunter need not worry whether his prize is *Morchella esculenta*, *augusticeps*, *conica*, *crassipes* or any other of the numerous species morels are named. All are equally delicious, and a prize in any man's bag.

Virginia woods rich in humus, clearings, streambanks, blackberry patches, old apple orchards, and in a good year even a backyard with a forgotten stump of a fruit tree, will nurture morels.

These mushrooms have a special affinity to burned over land, and will appear in abundance for several years after a fire. Peasants of southern Germany early noted this char-

The Blue Ridge Mountains are especially favored, and on weekends they will have their full quota of local and visiting morel hunters. Some carry an ordinary paper bag, and their prize may become gritty with sand, which no amount of rinsing in water would eliminate. Experienced hunters will equip themselves with a wicker basket and knife, cutting off the bottom of the stipe, scraping away all sand and dirt until the morel, a delight in cleanliness, is deposited in the basket.

Under ordinary circumstances the morels will end up fried with bacon, perhaps an egg thrown in for good measure. Few will find their way to gourmet restaurants to be snapped up by chefs seeking the unusual.

My favorite recipe calls for several morels of uniform size, stuffed with ground beef, minced ham and rice, lightly seasoned and slowly simmered in stock.

Virginia's woods and fields are beckoning. It is time again to seek that elusive spring tonic, the morel. Good hunting!



# Let's Cook Wild Greens

By MAJORIE LATHAM MASSELIN  
Richmond

FOR several days, my husband had been casting an uneasy eye over the growth of the grass in the back yard—the one rectangle of it that is not occupied by dog kennel, rose bushes, fig tree and other assorted shrubs. And the way he had said at breakfast, “That grass gets mowed before I do anything else this evening,” had made me realize that M-day was imminent, so I piled the breakfast dishes into the sink and went out to rescue the dandelions.

Unless it is right after a rain so that the soil is especially loose, you can pull them so that they break off just above the ground thereby leaving the root intact and able to produce another plant. The “heads” or flowers can be pulled out of the leaves and tossed over under a convenient hedge. Some will take root and grow without interfering with the hedge at all. In fact, the result is to create an early spring border of yellow flowers that is quite as pretty as daffodils.

Dandelions appear in food markets every now and then along with the other interesting “greens” that southern housewives like to cook, but I have always wondered why people should buy them when they have a built-in supply in the yard. Of course I realize that most people go to a great deal of trouble and expense to get rid of this attractive and tasty “weed” when it grows, as it does, promiscuously in the lawn, but I have never been able to figure out why. The lawns and gardens at Williamsburg abound with dandelions, and it has always seemed to me that they added a great deal of beauty and naturalness to the landscape.

The dandelion is a rather versatile weed in the kitchen. You can put it in a salad if it is young and tender and it gives a real flavor boost to a tired salad made of the usual greens. It can be cooked like turnip or collard and makes a hearty vegetable, and in the old days it was often used to make a kind of wine. Occasionally the wine was allowed to deteriorate into vinegar.

Like the fish in the river and the game in the woodlands, dandelions and a number of other edible greens that grow wild are just *there* for the limited work of collecting them and enjoying them—so why not? If you have never thought about the dandelion before as anything other than the target of a weed-killing spray, go on—live dangerously. Try cooking up a batch for dinner tonight.

As I have already explained, they are easy to gather. Simply give a little tug and the root breaks off just above ground. The flowers and flower stems should be discarded, not eaten, (although the flowers are used in making wine). Odd bits of grass, leaves, etc., have to be separated from the plant as well. The leaf itself is rather long, narrow and irregular. The name dandelion comes from the French *dente de lion* and means that whoever named the plant thought it looked like a lion's tooth. Never having examined one of those closely, I cannot vouch for the similarity but I think word derivations are always interesting.

When you have your basket full—and it takes quite a

large quantity to feed a family if you plan to cook them because, like all greens, they cook down drastically—you fill the kitchen sink with barely tepid water to loosen sand and dirt easily and plunge them in for a good thorough washing. The second water should be cool to keep them attractively fresh while you cut off the roots and discard any foreign matter you may have missed in the yard.

Put the cleaned dandelions in a large pot with water and a little salt and boil uncovered for 10-20 minutes or longer, depending on your personal preference for cooking greens. Drain thoroughly, chop and season with butter, a little freshly ground pepper and a touch of vinegar. Cooked or raw, they have a charmingly different and somewhat “herby” flavor.

Dandelions can also be treated in the more traditional Southern manner by cooking them with a ham hock or a piece of salt pork. Miss Nancy used to boil potatoes with them—small potatoes, well scrubbed and still in their skins.

I suppose I ought to tell you who Miss Nancy was. She was a character. If she had lived in the Middle Ages or even in early Colonial times, I am certain she would have been burned as a witch, and so would Old John and Miss Amy who lived with her. I knew them all as a child, and accepted them with a child's wisdom, but in later years I have often thought that the opening scene of *Macbeth* could be rewritten to accommodate all three of them very easily! Miss Nancy had a “bad leg” and got around with a cane. Sometimes it was harder for her to manage than at others and I suppose that was why she welcomed my visits—put up with them anyway. She let me carry her basket when she went out “gathering.” She gathered all kinds of interesting things—dandelions, cowslips, milkweed, hickory nuts, blueberries, mushrooms, wild strawberries *ad infinitum*. You could still live off the land in those days, and they just about did. Old John hunted. His eyesight wasn't supposed to be good. Still, Miss Nancy would listen for the number of shots he fired and know how many squirrels or rabbits she would have for the table. Three shots and she would get things ready for a stew.

“Guess we'll be having squirrel tonight,” she'd say, and later John would come in with three dressed squirrels. Or if there had been only one shot and no more for rather awhile, she was likely to get out the frying pan and decide on rabbit. She was always a good guesser. Things invariably turned out the way she forecast them. I learned a great deal of useful information from her about herbs and wild foods. Perhaps most useful of all was that I learned never to *waste* any of them. Whatever Miss Nancy “gathered,” whatever Old John killed, found its way to the table or into a “poultice” or got put to good use in one way or another. Even the entrails of the wild game got fed to her cats. Miss Amy was a smaller and wore wizened version of Miss Nancy. She wasn't dependable enough to send after a “mess of greens” the way I was. She used to “forget” things. She loved to come and play with my dolls and sometimes to amuse me she would tell my fortune. Everyone said Miss Amy was a bit odd, but Grandfather said, “Well, she's harmless. Leave her alone,” and so everyone did. But Mother and Grandfather always kept a “weather eye” peeled whenever Miss Amy came to play with me in the garden. That made it difficult in a way, because often she would have been rocking my doll babies for an hour or more, under continual surveillance from the house, before she would remember that Miss Nancy had sent her to fetch me. Then I would have to get permission to go visit and more often than not Mother would decide to come too “in case Miss Nancy needs something.” Occasionally



# Fawn

By JUDITH BUETTNER SHWONEK  
*Menasha, Wisconsin*

THE lovely fawn rested on a cool bed of fallen leaves and soft pine needles. His mother, trusting the security of this deep-woods place, had wandered briefly to exercise her legs and nibble at fresh grasses. She felt certain that her fawn's birthplace was ideal. Far from the noisy highway, secluded from the open field, very near to a cold, fast stream, and fertile with sprouting trees and shrubs, it was a perfect place for the fawn's first days and her comfort while she would be needed near him.

All infants—of the forest or of civilization—are blessed with trusting innocence. The adult beast, the grown man,

Awareness of the fawn did not come suddenly. It came to him like the drowsy waking from an afternoon nap in the hammock. In his peripheral vision the brownish patch took on dimension; then a glance called his full attention to the spotted fawn. The man turned nearer to the animal, but realizing that to see this beautiful, innocent child of nature in the place given by nature was a privilege few men have, he looked and marveled, but he did not touch the fawn. He longed to rub the lightly spotted back, even thought of carrying the fawn home to be a pet, but couldn't violate the trust the infant deer had in him.



L. L. Rue, photo

through experience loses his innocence and trust so in fear he runs or fights. The nested fawn had experienced no fear and his mother was not near to teach him that the fisherman approaching could harm him. This babe lay still, gazing with obvious curiosity at the unknown creature approaching haltingly through the brush.

Feeling the complete peace which surrounded him, the man walked softly near the bank, casting for the elusive trout he knew were in the cool, dark holes of the stream's bed. Lightly he dropped the fly, let it drift, then brought it in. The action being casually, yet carefully, repeated, and a step taken, was bringing him nearer to the watching babe.

they would invite Miss Amy in for "tea" and let me trot over the path to Miss Nancy's alone. That was always helpful, because chances were that Miss Nancy was finding it too difficult to "get around" that day and wanted me to gather some berries for a "slump." With Amy tagging along that could develop into an all afternoon project, since she ate them as fast as I picked them.

One thing Miss Amy would do happily and industriously was to gather dandelions whenever Miss Nancy agreed it was time to make wine. After we got the mountains of dandelions required for the project, they had to be washed and cleaned and gone over carefully. Some would be cooked but Miss Nancy would put aside all the good tender leaves

The fawn lay still and gangly. The man fished on. When he returned that way the place was empty. He was certain the doe had watched him and had remained silent and hidden. He was glad he had not proved the fear she must have felt.

Sorry that the fawn had moved, yet pleased and warm from having seen it once, the fisherman left the cool woods, walked away from the bubbling stream, and crossed the sunny field. But all these things and the infant trust stayed in his thoughts as he returned to the noisy highway and to his home where his own trusting child would glow at the story he would tell.

in a large bowl and make it into a salad for supper. She would add tomatoes, green peppers, onions, cucumber slices (unpeeled), whatever grew in her little garden plot outside the kitchen door, and then dress it with oil or sausage drippings and home-made vinegar, salt and pepper. Was it ever good! The wine was harder to sample. You had to have a legitimate reason to be in the cellar, for instance to get a panful of potatoes or apples or some other item kept there in barrels for winter eating.

Miss Amy used it as a "tonic"—she said a wineglass full taken regularly twice a day would ward off *any* sickness. I can't recall that she was ever ill so she may very well have known what she was talking about.



# Is Pygmy Pipe Rare in Virginia?

By DR. J. T. BALDWIN, JR.  
The College of William and Mary

COLONEL Donald W. Noake has done us a favor: he has let us use his excellent photograph of the Pygmy Pipe, sometimes called Sweet Pinesap (*Monotropis odorata*). I hope that all who study the photograph will be on the lookout for this supposedly rare plant and, if it is found, will send me a single specimen with date and place of discovery. Fallen leaves of trees serve as a measure of the magnification. Pygmy Pipe is never over three inches tall, usually less.

Thirty years ago (February, 1939) I came upon this plant just outside of Williamsburg. Every year since, when I have been in this area, I have found *Monotropis*: sometimes by returning to a known station; other times, by chancing upon it. The plant favors wooded slopes with a cover of leaf mold. By raking away the cover I have found the plant as early as November, and I have seen it in fruit as late as July. There are many records—of my own and of other collectors—for James City and York counties; otherwise known in Virginia from Roanoke, Botetourt, Augusta, and Montgomery counties. It is in all the states that border upon Virginia and extends into Georgia and Alabama. A second

Pygmy Pipe, *Monotropis odorata*, photographed May 8, 1968, by Colonel Donald W. Noake beside Colonial Parkway east of Williamsburg.



Andrey Avinoff's painting of pinesap and Indian pipe, plants often confused with pygmy pipe.

species may be in Florida. That *Monotropis odorata* is as rare as the records would suggest is doubtful. Observant individuals can help fill in the distributional gaps. The plant has been found in the Piedmont of North Carolina but not in the Virginia Piedmont—a distribution not consistent with reason.

Dr. Bernice M. Speese discovered the plants pictured here beside the Colonial Parkway east of Williamsburg and within twenty yards of the parking area at Jones Millpond. Colonel Noake photographed them May 8, 1968. We saw them again January 31, 1969.

Pygmy Pipe is saprophytic: being without chlorophyll it feeds on dead organic matter secondhandedly by way of fungi that permeate the root mass of the plant and grow into the surrounding humus. The stem is translucent lavender; the flowers, pinkish lavender; the scaly leaves, grayish brown. After the flowers open (in March with us) they have a spicy aroma: a friend in Maryland tells me that on occasion he has discovered *Monotropis* by first detecting its delightful fragrance.

The novice often confuses Pygmy Pipe with Indian Pipe (*Monotropa uniflora*) and Pinesap (*Monotropa hypopithys*), they too being saprophytic. Accordingly, we reproduce here photographically a beautiful painting of these plants by Andrey Avinoff which is Plate 108 in *Wild Flowers of Western Pennsylvania and the Upper Ohio Basin* by O. E. Jennings. Both these plants are common throughout Virginia and are bigger than Pygmy Pipe. At flowering the stem summit of these three plants turns to one side; hence the generic names based upon the Greek *monos* (one) and *tropos* (turn). Indian Pipe has a waxy white or pinkish fleshy stem with a single pendant flower maturing into an erect fruit. Pinesap has a downy, tawny-to-reddish stem with several nodding flowers that become upright in fruit.

I conclude with the admonition that saprophytes cannot be transplanted.



By H. RAMSEY TERHUNE  
*Viewtown*



Karl H. Maslowski photo

A HUSHED dawn is quietly covering the short spring night with a coverlet of red and gold. Quiet marks the ponderous work of a new day, as if an awed creation were silenced by some strange mandate. And the old guy, asleep on his back as he seemingly strangles and recovers from a variety of gurgles and bubbling, is blissful in that rich period before the thing on the wall is to jar him into consciousness.

Stealthily the sun fingers the old pines along the lane; steadily it reaches upward on the greening butternut with the hollow limb. And then, as if a trigger has been touched, it happens. With a staccato rattle and a defiance spread over forty acres, the mandate of dawn is shattered.

Day bust it is, for with a convulsive jerk the old man sends the bed clothes flying and with a sweeping leap is on his feet. In his heart is an urge to kill—kill that “pecker bird” in justifiable homicide. It’s the third day that woodpecker has blasted both silence and sleep at 5 a.m., and he has to go!

An ugly chin is thrust into the morning mist as the gnarled hand claws the corner for the double barreled 12. The curtains hallow and fall as the caress of a quiet hreeze pours its soft impeachment on a heart of stone. Nothing will melt this wretched soul with a commitment to kill—to hlow that pecker bird to bits.

He feeds the long black barrel toward the butternut tree when suddenly, from a hud studded perch, there rises a burst of melody, transcending all the overtures composed by gifted mortal.

“Shut up, Mocker: y’ cain’t sing at a funeral!”

But this exuberant fellow just pours out the notes in increasing volume and variety, until his fortissimo hursts are blended with a series of soft tones in a perfection with which only the Creator can endow a mockingbird. Now, from beyond the crumbling snake wood fence, Cousin Robin takes his cue, bubbling into the duet with a series of trills until it is difficult to distinguish the originator from the mocker.

It is now 5:15 a.m., the day’s most hallowed hour, the sacred hour when the dawn of Spring fairly breathes peace and reverence. Revenge is as out of feeling in this scene of wild charm as murder in a churchyard. And indeed, the charm undoubtedly would work, hut the fool woodpecker, at that very instant, decides to beat anew his stupid head against a hollow limb. This inhred rudeness of the rascal drummer boy breaks in on the bird songs like a wacky

metronome set off in the midst of a concert.

“That does it, by gum,” froths the old guy, as he lays a weathered cheek along the harrel.

“I think I’ll let him have the choke—that will really powder him—he’s a vicious monster—a no good varmit—an’ not a soul in the world would blame me!”

But even as old hangman mumbles to himself, a subtle, cunning reprieve is being set up for the pecker bird. Dame Nature, who cares for all her own, is weaving a spell. At times hard and ruthless, she now softly overpowers the old guy. He is being hypnotized and doesn’t know it. He is licked without pain, but she feeds him another tranquilizer. The intoxicating ambrosia of a full bloom lilac wells up through the open window, steals past the crooked nose and into the very nerve center of decision. He sniffs the heady aroma, then breathes some more as the utter extravagance of the swaying crabapple fills the cup to overflowing. Then the petals fall in a bridal shower as the breeze carries the perfume afresh.

Old man woodpecker killer is a dead duck, at least insofar as morning meanness is concerned. He has been tangling with a most formidable opponent. Nature, too, can be a killer, or she can be a bewitching sorcerer. However, on this heautiful morning she chooses benignly to anesthetize her opponent with one calculated dose after another.

“Mnm,” murmurs the old one, who scarcely notices as the double barrel slips to the floor. He stretches his skinny neck out to the left where the boxwood hedge marks off the parade ground for tall soldierly tulips, red coated and impressive like freshly outfitted Marines. And there their escorts, flaxon crowned daffodils, nod their howed heads as demure little ladies should. Oh yes, mortal hand has planned the arrangement, placed the bulbs, and etched the patio with green things, but it was heaven’s nature that empowered them to reach upward and squeeze the pigment from the sky.

The web is spun, the snare sprung, and the old fellow deep in the spell. With elbows propped on the window sill, and hands cupped around his chin, he just gazes and gazes, breathes and sighs. He is in another world, a buttery weakling—with that woodepecker home scot-free. In fact an hour later, while still under the influence, Nature laughs silently as the old guy writes in his diary:

“Up at 5 a.m., a wonderful day. Nothing like the sights and perfumes of Spring!”



shad, it is smart fishing to use a snap swivel between the line and the lures. A good trick is to rig your lures before you arrive at the river.

Darts work best if not tied to the line with a snug knot. It is far better to tie the dart so that can work in a small loop, say about a half inch to an inch in diameter. If you intend to use two darts, tie one at the end of the line and another in a dropper loop about a foot to a foot and a half above. About a foot above the top dart cut the line and tie another loop. This loop goes in the snap swivel.

If you intend to use a dart and a spoon, rig the dart on top and the spoon at the end of the line. If rigged in reverse, the spoon has a tendency to ride on top of the water.

When fishing with only a spoon some anglers prefer to use a snap swivel as a direct connection between the line and the lure. This often works but it is frequently better to use a dart-style loop, tying the spoon directly to a bit of line and using a snap swivel a foot or so above the bait.

There are many techniques for using darts and spoons for shad. If the angler wants to catch fish with some regularity, he must be flexible and willing to experiment. As a rule, a cross stream, downstream cast coupled with an erratic but fairly fast retrieve will catch fish. For best results it is a good idea to keep the rod tip low and give the lures plenty of rod tip action. There are times, however, when this method will not produce.

Sometimes the same cast will work better if the angler merely takes the slack out of the line and lets the lures swing around with the current and gives them the slowest retrieve possible. If the fish appear to be deep, it is often wise to cast a pair of darts almost directly upstream in fast water.

With the upstream cast the angler has several options. He can let the lures bounce back along the bottom, merely keeping the slack out of his line so he can detect hits, or he can bring the baits back to him quite fast, experimenting with all sorts of rod tip actions on the way. Both methods pay off.

A surprising thing about shad darts is the variety of fish they are capable of catching. By allowing my darts to work deep on the upstream cast I've caught channel cats, bullheads, carp, bluegills, white perch, yellow perch, smallmouth bass, and rockfish on darts while fishing in the Rappahannock for shad.

I remember one morning in particular. We were fishing the Rappahannock, just below the Route 1 bridge in Fredericksburg after a morning hunt for turkeys. The river was nearly deserted and the water was running quite low. Everything that could be wrong was so, except the water was clear.

After several fruitless casts near shore I waded to a mid-stream bar where I could cast to a deep run near the Fal-mouth side. I tried an upstream shot and the darts stopped cold after riding the current only a few feet.

Thinking that I had hit a rock, I twitched the rod tip gently, hoping to flip the lures loose. It was as if I had pulled the pin on a hand grenade. The water boiled as something heavy and very determined shot downstream with express train speed.

I put all the pressure on that my ultra-light tip and 4 pound test line would allow, but I couldn't prevent the fish from charging through a gap in a line of rocks, snapping my frail line in the process.

Wishing that I had brought along heavier tackle, I tied on another set of darts and repeated the cast with almost the exact same results. I had an idea that I was fighting over my weight class before, but now, as I tied on my third

set of lures, I knew it.

I couldn't believe the scream of my drag as the third cast again connected with a husky fish. This time, however, I wasn't going to stand and fight as before. I charged downstream to head off the fish at the rocks. I won the race, but the battle continued.

In the driver's seat now, I had the fish fighting the current and my tackle at the same time. He gave me some anxious moments before I slipped my landing net under more than four pounds of very tired white shad.

The big white or American shad come later than the others, generally in May. These bigger fish usually prefer the larger rivers. Many are taken in nets in the James and York as well as other big waters. Anglers find them in the Nottoway, the James below Richmond, and occasionally in the Rappahannock. Many are often taken in the Potomac. I suspect that more white shad are present in the rivers than are indicated by the catch, because the whites arrive so late that many anglers had quit shad fishing when the hickory run fell off.

While hickory shad average between one and three pounds, whites run much heavier. Some are reputed to reach 12 pounds, but 3 to 4 pounds are considered good fish here. Often anglers have a problem distinguishing between white and hickories. The key is the mouth. The lower jaw of the hickory is longer than its upper. The lower jaw of the white is entirely within the upper jaw, when the mouth is closed.

Virginia's great shad fishing competes with trout for springtime popularity. The hickory is our most common shad and provides most of the action, but the white shad is the prize. Although all of these spring visitors, herring, hickories, and whites, are often present in numbers that defy counting, one can't help but feel a little sick when he notes the numbers of fish that are wasted by anglers along the streams.

Some lay rotting on the creek bank with slits in their bellies, mute evidence that someone had at least coveted the roe. But many buck shad are also found dead where they were left by anglers who just didn't want to carry them home. Sometimes the smell is so bad that it is hardly possible to fish.

Shad roe is fine fare, but their flesh is excellent too. Some devotees of shad have the expertise, time and patience to bone their catch before cooking. Others cook them so that their bones become soft enough to eat. The trick is to bake the shad for a long time. Oven temperature should be about 250 degrees, and the fish should be baked from an hour to an hour and a half to the pound. Some cooks wrap their fish in aluminum foil while others don't. Before cooking, the fish should be sprinkled with your favorite spices and brushed inside and out with melted butter.

I always toss a few shad in the freezer to use as bait when I travel to the surf. Last year my shad saved the day when we drove to Cape Hatteras and could buy no cut bait. Flounder, trout and blues showed a definite preference for a shad dinner.

For unknown reasons the white shad that used to appear below the dam on the Chickahominy no longer appear in fishable numbers. Shad runs have dwindled on other eastern streams until recently, when they began to return in greater numbers. They are more tolerant of our pollution than most fish and they are quick to show the appreciation as we clean up our streams. Because of their numbers and strength and determination to survive we can be certain that silver will always run in our streams in spring—as long as we keep them clean.





Bird  
of the  
Month:

## Hermit Thrush

By DR. J. J. MURRAY  
Lexington

AS has been remarked before in this series, scientific names change more frequently than common names. Long known as *Hylocichla guttata faxoni*, this thrush, according to Dr. John W. Aldrich, should be known as *Catharus guttatus faxoni*. This new name has not yet come into general usage, however.

The hermit thrush has a wide breeding range, from central Alaska across to southern Labrador and Newfoundland, south to northern New Mexico and the mountains of Maryland. In winter it moves south to southern Florida and through Mexico to Guatemala. In its wide breeding range it is divided into some eight recognizable subspecies or varieties.

In Virginia the subspecies named above is common in migration time all over the state. Possibly a few breed in our mountains. One was seen and two heard at 3000 feet near Skyland in the Shenandoah National Park on June 21, 1958, by Charles Steirly, James Watson, and James Eike. This would seem to indicate breeding, although, of course, they may have been very late migrants. The bird occurs in winter fairly commonly east of the Blue Ridge and occasionally farther west.

The normal dates for this bird in Virginia run from September 8 to May 14. The Christmas counts indicate an apparent decrease in the northern part of our state, with only 12 to 20 there in recent years.

This thrush nests from the Cranberry Glades in eastern

West Virginia and from the mountains of Maryland well up into Canada, to southern Yukon and across to southern Labrador. In Virginia it is common as a migrant in spring and fall. As a winter visitor it is scarce in the Valley but fairly common east of the Blue Ridge. It seems to be less common in northern Virginia in recent years. The Newfoundland race of this species has been collected on Assateague Island and at Back Bay.

The hermit thrush is a lovely bird. In general it is marked like its relatives, brownish above and spotted below on the upper breast. It and the wood thrush are marked with reddish, but the arrangement is reversed. The wood thrush is reddish on the head and upper back, the hermit thrush on the rump and tail. In the hermit thrush the chest is heavily spotted, while the upper breast has lighter and smaller spots.

The striking thing about this bird, as with all its thrush relatives, is the song. In a family of fine songsters it stands out. Many authors have described the song, but none have done full justice to its ethereal quality. It varies greatly, as if the singer were extemporizing and consciously playing with its melodies.

The nest, which the writer has not seen, is placed on or near the ground. Like the nests of its relatives, it is well built of grasses and leaves and carefully lined. The eggs are greenish-blue. Usually four are deposited. At least two sets, sometimes three, are laid each summer.





Edited by HARRY GILLAM

## Game Commission Moves To New Richmond Quarters



The Virginia Commission of Game and Inland Fisheries has completed the transfer of its main office in Richmond from the former 7 North Second Street location to recently refurbished offices at 4010 West Broad Street. The Commission purchased the Broad Street building from the Virginia Hospital and Medical Service Association (Blue Cross and Blue Shield) in 1965. The original owners continued to occupy the building under a lease agreement until early 1968.

The new location provides needed room for expansion of office facilities and parking space in the rear for Commission employees and the public. An attractive lobby permits the display of many of the Game Commission's mounted birds, animals and fish. An attractive walnut paneled Conference Room is located in the first floor. The site includes nearly 2 acres of ground and parking facilities for 120 cars.

The Game Commission occupies the entire first floor and has its data processing center located on the second. The remainder of the second floor is leased to the State Water Control Board, whose central office and laboratory facilities are located there. An expansion of the group's second floor laboratory facilities is planned in the near future, necessitating a moderate addition to the building. The old office building on Second Street will be sold.

All Commission business, including boat registration, sales of special licenses and permits, film loan service, Game Commission meetings, and the distribution of publications, will henceforth be conducted from the Broad Street location.

## A Sacrifice to Ignorance



Waynesboro News-Virginian Photo  
by Garvey Winegar

This magnificent Golden Eagle, one of the few ever recorded in Virginia, was found beside an Augusta County road where he had been shot by some ignorant "sport" or misguided landowner. It was, of course, a violation of both federal and state law to shoot this bird, but he had been dead for several days when found by John Nuchols, of Stuarts Draft, a rural mail carrier. Nuchols got special permission from federal authorities to have the bird mounted.

## Construction To Start On Rockbridge Lake

Bids on construction of a 31-acre Game Commission public fishing lake in Rockbridge County were opened in Richmond February 25. Plecker Brothers Construction Company of Millboro, Virginia, was the low bidder with a bid of \$97,378. The lake will be part of a 500-acre recreation complex being financed jointly by the Game Commission and Rockbridge County with federal assistance through the Land and Water Conservation Fund. The State Commission of Outdoor Recreation will contribute about \$25,000 to the project if present recreational development plans for lands surrounding the lake are approved at the federal level.

The lake will be managed by the Game Commission as a warm-water fishing facility. It will be about 42 feet deep and offer angling opportunities for bass, bluegill and channel catfish. The Commission will construct a boat ramp, parking area and concession building. If construction proceeds on schedule, the

lake could be opened to fishing as early as 1971.

Rockbridge County plans to develop a 50-unit campground and a 50-unit picnic area on the site. Also in the development plans are nature trails, comfort stations and a shelter. Some hunting may be allowed on the tract.

The site of the development is approximately nine miles west of Lexington near the Community of Alpin. Route 653 off Route 770 crosses the lake site.

## Jaycee Safety Efforts Noted



Game Warden Jesse Updike of Rockingham County presents a Hunter Safety Achievement Award certificate to Pablo Cuervas of Broadway, president of the Broadway Timberville Junior Jaycees, in recognition of that group's sponsorship of hunter safety classes at Broadway High School.

## The Big One That Didn't Get Away



Everett Catrell, Night Jailer at Wise, stands under this fine 12 point, 195 pound field dressed deer. He killed the deer in Page County November 19, 1968. The rack measures 29 inches at the widest point and 23 inches between the tips of the antlers. If you think that isn't wide, put a tape on the next rack you see.





Edited by ANN PILCHER

## Flashing Wings



Sitting amid the cattails in a Pennsylvania marsh, John Terres watched the marsh hawk perform his intricate courtship flight, and later he recorded what he saw in his journal. *Flashing Wings: The Drama of Birds in Flight* is the result of these and other personal observations on how birds fly, made by an outstanding field naturalist and ornithologist. The book was published last spring by Doubleday & Co., Inc., 277 Park Ave., N.Y.C. 10017, and sells for \$4.95.

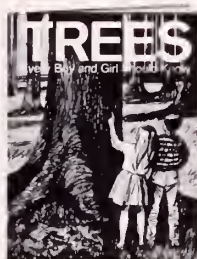
"I had seen in the distance a gray male marsh hawk flying about over some trees. I suspected a nesting pair in the marsh beyond. When I stole through the woods and came to the edge of the opening I heard the shrill cries of the male. Through the newly leafed April woods I could see him gliding straight up in the air, then diving earthward in a series of undulations, as though he were riding an aerial roller coaster.

"He rose to about one hundred feet above the marsh, almost stopped in mid-air, then, like a spent arrow, down he plunged. At the bottom of his dive, he flattened away in a long curve like the back of the letter C, then shot upward again, and hesitated, then dived earthward again. He was gliding up and down in a series of giant U's (UUUUUUUU). At the top of a rise as he hung in the air, he sometimes twisted over on his side, or did a front somersault before diving down toward the marsh again. It was all beautifully graceful like poetry written on the air."

—From "Flashing Wings"  
by John Terres

## New Tree Book

Here's a book that answers many questions about the wonderful world of trees. The book says to each boy and girl, "Like you, each tree belongs to its own family. And tree families are some of the best friends human families have." *Trees Every Boy and Girl Should Know* (80 pages of pictures and text) is available through its publisher, The American Forestry Association, 919 17th St., N. W., Washington, D. C., 20006, for \$2 per copy.



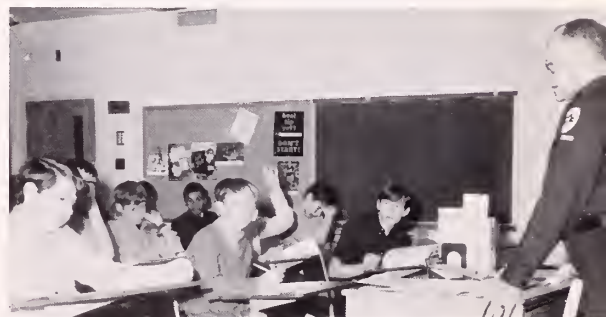
in  
Natural  
Science



## Born to Learn

We are born to learn, to know, to discover, to give, and to receive. We tremble with fear, with love, with hatred, with joy. We of the world lift our souls in praise of some god, material or spiritual. We have faults: greed, lust, hatred, prejudice, conceit. We fancy ourselves masters of the Universe and yet we have no knowledge of what is on the nearest planet. We are wise men and fools. Our philosophers speak with care and forethought of the nature of man. Even they cannot understand the mystery of themselves. Life is a cycle of peace and war, famine and plenty. We have not yet learned how it is that we live, laugh, and love. We try, but our brains are too weak. There is only one that knows and understands all. We know only the ma-

## Phys Ed in the Classroom



Courtesy Northern Virginia Daily  
Warden J. W. Simpson of Front Royal is shown instructing Warren County Intermediate School students in hunter safety during physical education period. Earlier this year one hundred thirty eighth graders attended the four-hour National Rifle Association-Virginia Game Commission course which was sponsored by the Warren County Board of Supervisors. Messrs. Bennett and Yates Hall plus Game Warden David Ramsey shared in the instruction.

## Nature Study and Conservation Materials

National Audubon Society, 1130 Fifth Avenue, New York, N.Y. 10028, has recently published *Audubon Aids in Natural Science*, a helpful illustrated listing of Audubon study programs, nature bulletins, flash cards, and audio-visual aids which are available at reasonable prices from the Society. In Washington, D. C., the Superintendent of Documents, U. S. Government Printing Office, has issued a listing of 1968 publications on conservation and related Department of the Interior subjects.

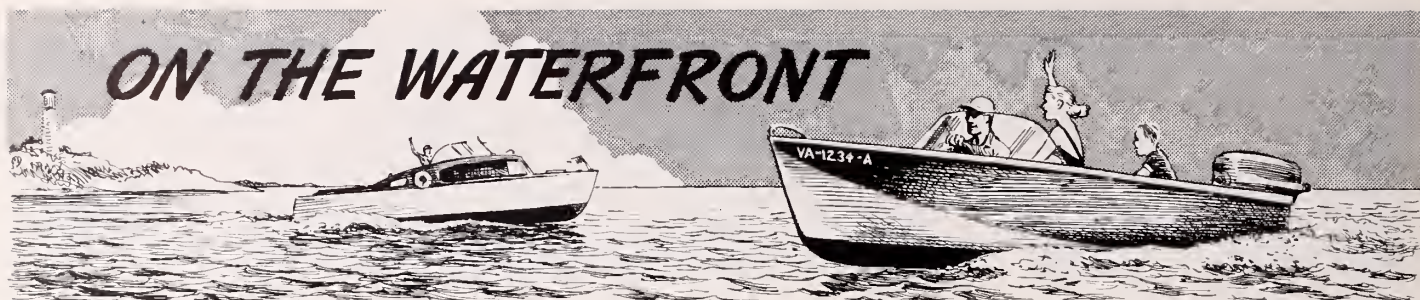
chine; not the Power which causes it to operate.

In failing to understand ourselves, we turn to other things. Nature welcomes us with a mother's love and says, "Come to me, for I am Life." And so we come, to seek refuge, to accept challenge, to try to understand our intricate selves.

We come to Nature Camp for much the same reasons. We come to see how it can be that there is God, Life, and Man. We peer into Nature's secrets and nod our heads and smile, thinking that we understand. We gain a little knowledge of other things, of other lives, other hatreds, other loves. In finding the truth we find ourselves.

—ELIZABETH BROWNRIGG  
Nature Camp, 1967





Edited by JIM KERRICK



Courtesy of Evinrude Motors

Safety of the skier depends on the boat operator and observer.

### Ski Boat Drivers

When watching a water ski show, most spectators tend to overlook, or take for granted, one of the most important members of the cast—the boat driver.

It has been said that handling a ski tow boat requires almost as much skill as trick skiing.

While it may not be necessary for the driver of the family ski boat to be as adept as a show driver, there are some basic rules the weekend tow boat driver should observe.

First of all, it is the driver's duty to see that the equipment is in perfect condition. This includes the boat and motor and also the tow lines. The motor should perform smoothly and responsively. The tow line should be free of entanglements and worn spots.

Drivers, as well as skiers, should know and use the accepted hand signals.

A practice that not only makes the driver's job easier, but also increases the safety factor, is to have another person in the boat to act as an observer. A driver can't watch the skier

and look ahead at the same time.

The first step in pulling a skier from a deep water start is to accelerate slowly until all slack in the tow line is taken up. Then, when the skier calls "hit it," the driver should accelerate steadily, but not too fast, until the skier is up on plane.

To return the tow line to a fallen skier, slowly drive around him in a semi-circle until he is able to grab the

handle.

A responsible tow boat driver also always shuts off the motor when picking up a fallen skier, instead of merely shifting the motor to neutral.

A skier appreciates and enjoys a smooth, easy ride rather than one with fluctuating speed, sharp turns and near misses from docks, piers or other boats. The type ride he gets depends on the boat driver.

**Do Your Share to Clean up Waters** and duty. This is especially true for the boating fraternity.

If every litter bit hurts, it stands to reason that every little bit helps. Even the slightest effort to clean up our waterways, and keep them that way, is a valuable contribution.

Carry a litter bag and use it. Encourage your boating friends to do likewise. Don't throw anything overboard. The bottom of a lake or stream isn't an underwater junkyard.

When you're on the water and see floating debris, pick it up. It only takes

a few seconds to make up for someone else's thoughtlessness. Don't be surprised if it makes you feel a little bit better for doing it.

Talk to fellow boatmen about a clean-up project. Almost every area has a favorite picnic ground, launching site or beach. Why not organize family work crews some Saturday?

Play modern day Johnny Appleseed. Take a tree planting cruise. Tree seedlings are available from a variety of sources at a very small cost. Contact local conservation groups. They can assist you in obtaining seedlings.

Carry a litter bag on the boat and use it. Don't throw anything over the side.

Evinrude Motors photos







TURKEY GOBBLER



SCARLET TANAGER



COMMON TERN



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MOORNING DOVE



PURPLE FINCH



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It's Unlawful to keep

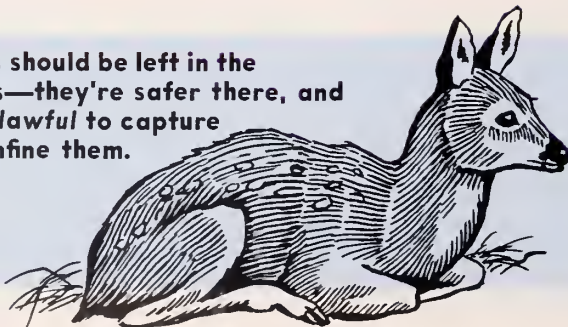
# Wildlife in Captivity

Wildlife is the property of the State, and may be kept in personal possession only during established seasons, and then only when taken by lawful means. This applies to capturing and keeping alive as well as killing. It is illegal, therefore, to possess wild birds and game animals, *dead or alive*, except during authorized seasons, and in any event wildlife protected by closed seasons may not be kept in captivity. Species protected by closed seasons include bear, deer, fox, rabbit, squirrel, beaver, mink, muskrat, opossum, otter, raccoon, and all native wild birds except crows, buzzards and jays.



Bear cubs are frequently involved in illegal possession cases.

Fawns should be left in the woods—they're safer there, and it's *unlawful* to capture or confine them.



GRAY SQUIRREL



COTTONTAIL



RACCOON

Although game species, none of the above mammals may be legally kept in captivity.